REMARKS

In an Office Action dated July 28, 2006, a final rejection, the Examiner rejected claims 1, 3, 5-8, 10, and 12-14 over the teachings of U.S. Publication No. 2003/WO50075 (Rangarajan) in view of International Publication No. WO 00/51365 (Sawyer); rejected claims 2 and 9 over these publications and further in view of U.S. Publication No. 2005/0032532 (Kokkonen); and rejected claims 4 and 11 under 35 U.S.C. 103(a) as being unpatentable over the publication cited for claim 1 and further in view of U.S. Patent 6,470,182 (Nelson).

Responsive to the grounds for these rejections, Applicants are amending claims 1 and 8 to clarify the subject matter of these claims. Applicants will concentrate on the grounds for the rejection of the only independent claims, claims 1 and 8.

In the rejection, the Examiner stated that the claims did not recite a two-stage process as stated in the argument. The claimed subject matter represents a process in which the identification of the base station and sector is converted into a standard format and in which the information in this standard format is then converted into geographic coordinates. However, Applicants did not specifically recite that the process includes the conversion of the data identifying at least one of a country, a vendor, a region, and a service provider into an identification of a format (for example, an identification of the Chinese format, discussed on page 4, line 20 - page 5, line 6 of Applicants' specification). The data for identifying a format is then used to convert the received format for identifying the base station and sector into a standard format for identifying the base station and sector. It is this latter standard format which is then used for translation into a geographic location. This is described on page 4, line 29 - page 5, line 6 of the specification.

> For some vendors, such as all vendors providing systems to China, the base station identification consists of the 8 bits of the first byte and 4 bits of the second byte, the other 4 being used for a sector identification; for other countries and other vendors, the first byte contains 4 bits of the base station identification and 4 bits to identify the sector while the second byte contains the other 8 bits of the base station identification. This layout has not been standardized. The database is required to perform the translation from a varied format and data for identifying the format, and to perform the translation from the identification of the base station and sector to a geographic location.

Applicants believe that their clarifications as expressed in the amended claims are responsive to the Examiner's response.

Applicants respectfully submit that this process of using the data for identifying at least one of a country, a vendor, a region, and a service provider to identify the format of the received data for identifying a base station and sector and for converting the received data for identifying the base station and sector into a standard format for subsequent translation into geographic location is not taught by Sawyer.

As now amended, Applicants teach "using said data for identifying at least one of a country, a vendor, a region and a service provider to obtain identification of a format...."

In terms of the Description, for example, the identification of China identifies that the information identifying the base station and sector is in the Chinese format.

"[s]aid database using the identified format information to convert said data for identifying said base station and sector into a standard format" describes the step of using, for example, the identification of China, to convert the received Chinese format into, for example, the format used in the U.S.

This is followed by the step of "[t]ranslating from said identification of said base station and sector in said standard format to a geographic location of said base station and sector."

To summarize, the overall process consists of:

receiving base station and sector data in a possibly non-standard format;

receiving information (country, etc.) for identifying the format;

using that information to convert the base station and sector data into a standard format; and

translating the base station and sector data in a standard format to a geographic location.

Applicants respectfully submit that this process is different from that of Sawyer.

For the Examiner's convenience, in view of the amendment of these claims, Applicants will paraphrase the Examiner's grounds for rejection in the wording of the amended claims. Specifically, the Examiner has cited Sawyer because Rangarajan did not disclose a method wherein

in a database, using said data for identifying at least one of a country, a vendor, a region, and a service provider of said base station to obtain identification of a format for identifying a base station and sector; and

said database using the identified format to convert said data for identifying said base station and sector into a standard format; and

translating from said identification of said base station and sector in said standard format to a geographic location of said base station and sector.

The subject matter of the citations from Sawyer used to supply these missing elements, are being reproduced here for the convenience of the Examiner:

FIG. 1 is a simplified block diagram of an ANSI-41 cellular telecommunications network 10 modified in accordance with the teachings of the present invention. A mobile station 11 is shown operating within the cell coverage area 12 of a radio base station (RBS) 13. When the mobile station registers, a Cell-ID 14 is sent to a serving mobile switching center (MSC) 15 over an interface 16 which may be implemented in accordance with IS-634 or a proprietary interface. Within the MSC is Radio Network Controller (RNC) software 17 and Mobile Switching Center (MSC) software 18. The RNC software processes the registration and sends the Cell-ID or a location area identity (LocArea-ID) to the MSC software for the location where the registration was received. A location area is a group of cells within which the mobile station may roam from cell to cell without having to re-register.

The MSC 15 interfaces with the rest of the service network 19 utilizing the ANSI-41 intersystem signaling protocol 21. The MSC sends a Registration Notification (REGNOT) Invoke message or a location updating message to the HLR 22. This message normally includes the Cell-ID or the LocArea-ID along with a MSC identity (MSCID). The HLR functions to provide radio network access, and is capable of recognizing cells or groups of cells. The service network may also include various gateways 23 connecting to other networks, and a message center 24.

The RNC software 17 interfaces with the radio access part of the network, and handles radio access on a cell basis. Therefore the RNC software recognizes and utilizes cell-related identities such as Cell-IDs and LocArea-IDs. The present invention adds a cell/coordinate table 25 to the MSC 15. The cell/coordinate table converts Cell-IDs and LocArea-IDs to sets of latitude and longitude coordinates. The coordinates are then passed to the MSC software 18, and the coordinates are included in the ANSI-41 messages sent from the MSC to other nodes in the service networks. Since some nodes in the service network such as the HLR 22 are currently programmed to recognize Cell-IDs and LocArea-IDs, the preferred embodiment of the present invention includes Cell-IDs and LocArea IDs in the ANSI-41 messages as well. [WO 00/51365, page 4, line 15 - page 5, line 12]

Thus, Sawyer teaches the conversion from an identification of a cell site to a geographic location, but does not teach the recognition of a non-standard cell site and sector format, and the conversion of that non-standard format into a standard format prior to this conversion.

In contrast, the subject matter which is recited in the last five clauses of claim 1 is based on the Detailed Description, page 4, line 20 - page 5, line 6. These are being reproduced here for the convenience of the Examiner:

> In accordance with the ANSI-41 Standard, the cell and sector identification information consists of three sets of double octet entities. The first set is a location area identifier. The second set is a serving cell identifier and the last set is a target cell identifier. No target cell identifier is needed if the mobile station is not being handed off. The location area identifier identifies the cell and sector in which the mobile station is currently found. The serving cell identifier also identifies the cell and sector in which the mobile station is currently found. For the case in which a mobile station is being handed off between one cell and sector and a second cell and sector, the target cell identification is used to identify the cell and sector to which the mobile station is being handed off. For some vendors, such as all vendors providing systems to China, the base station identification consists of the 8 bits of the first byte and 4 bits of the second byte, the other 4 being used for a sector identification; for other countries and other vendors, the first byte contains 4 bits of the base station identification and 4 bits to identify the sector while the second byte contains the other 8 bits of the base station identification. This layout has not been standardized. The database is required to perform the translation from a varied format and data for identifying the format, and to perform the translation from the identification of the base station and sector to a geographic location.
> [Ser. No. 10/601,899, page 4, line 20 - page 5, line 6] [Emphasis added]

In summary, as shown in Applicants' document, there is no universal international standard for the specification of a location area identifier. Applicants have specified a process wherein the format of a received location area identifier is identified, based on "at least one of a country, a vendor, a region and a service provider", the identified format is then converted into a standard format location area identifier (so that, for example, the Chinese format is converted into a U.S. format in a U.S. system); the standard format location area identifier is then translated to a geographic location. Applicants respectfully submit that Sawyer does not teach the conversion of a non-standard location area identifier received in a service network to a standard format location area identifier for subsequent conversion into a geographic location. It is clear from the cited passage

that there is no such teaching of converting a <u>received location area identifier</u> into a <u>standard format location area identifier</u>.

Accordingly, Applicants respectfully submit that the subject matter of claim 1 and the analogous apparatus claim 8 is not taught by the combination of Rangarajan and Sawyer, and should be held allowable.

Accordingly, Applicants respectfully submit that the subject matter of claim 1 as amended should be held allowable over the teachings of the cited prior art and that claims 2-7 should be held allowable as being dependent from an allowable independent claim.

Claim 8 should be held allowable for the same reason that claim 1 should be held allowable since it is an apparatus claim based on the same subject matter as claim 1. Claims 9-14 should be held allowable as being dependent from an allowable independent claim.

Accordingly, Applicants respectfully request that the Examiner reconsider the grounds for his rejections, allow all 14 claims as amended, and pass the application to issue.

This is a response to a final rejection. Applicants respectfully submit that the amendments to the claims do not introduce new claimed subject matter, but represent only a clarification of the subject matter previously claimed.

If the Examiner feels that a fax or voice contact would help to advance the prosecution of this application, the Examiner is invited to call or fax Applicants' attorney at 630 469-3575.

Respectfully submitted

S. Wan et al.
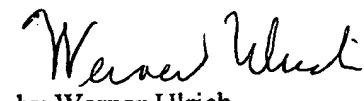
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